

the bushland shire

*Bushland and Biodiversity
Team*

Annual Report 2009-2010



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One Tree Reach Wetland, Laughtondale

1.0 Introduction and Context

Hornsby Shire covers a total of 51,000 hectares of which approximately 69% is bushland. The Bushland and Biodiversity Team is responsible for management of 276 natural areas that are owned by Council and Crown land where management is devolved to Council. The natural areas are primarily bushland with some natural wetlands. Council also jointly manages the 3,830 ha Berowra Valley Regional Park with National Parks and Wildlife Service, and provides assessment, education and incentives to private landowners for biodiversity conservation. The Team is therefore responsible for management of 5,950 ha of public bushland and providing biodiversity incentives and advice for 29,240 ha of private bushland. Council is committed to protecting and restoring its local natural environment guided through legislation and its adopted Biodiversity Conservation Strategy, on ground bush regeneration work and a large volunteer Bushcare Program.

The more significant bushland reserves are:

Arcadia: Arcadia Park, Calabash Road Bushland, Calabash Point Bushland, Halls Creek Bushland

Asquith: Michigan Avenue Bushland, Mills Avenue Bushland

Beecroft: Beecroft Reserve, Byles Creek, Chilworth Reserve, Castle Howard Bushland, Edwards & Lamorna Bushland, Fearnley Park, Orchard Road Park

Berowra: Berowra Community Centre Bushland, Combora Circuit Bushland, Evanda Street, Bushland

Berowra Creek: Bar Island, Neverfail Bay Bushland

Berowra Heights: Berowra Park, Cunio Point Bushland, Turner Road Bushland

Berowra Waters: Furber Park

Berrilee: Bay Road Bushland, Woolwash

Brooklyn: Brooklyn Park, Brooklyn Railway Bushland, McKell Park, Seymours Creek Bushland

Canoelands: Pumpkin Point Creek Bushland

Carlingford: Ray Park

Castle Hill: Upper Pyes Creek Bushland

Cheltenham: Cheltenham Bushland

Cherrybrook: Kanangra Crescent Bushland, Lakes of Cherrybrook, Pyes Creek Bushland,

Dangar Island: Kiparra Park,

Dural: Muraban Road Bushland, Pyes Creek Bushland

Epping: Dence Park, Midson & Plympton Road Bushland, Terrys Creek Bushland, Vimiera Park

Fiddletown: Bloodwood Road Aboriginal Area, Calabash Point Bushland, Collingridge Bushland Sunnyridge Road Bushland

Galston: Fagan Park (including Carrs Bush), Galston Park, Galston Recreation Reserve and Hayes Park, Knights Road Bushland

Glenorie: Campbell Crescent Bushland, Glenorie Park

Hornsby: Florence Cotton Reserve, Hornsby Park, Manor Road Bushland, Reddy Park, Rosemead Road Bushland, Waitara Creek Bushland

Hornsby Heights: Crosslands, Ginger Meggs Park, Rofe Park Bushland, Somerville Road Bushland

Laughtondale: One Tree Reach Wetland

Maroota: Molesworth Reserve, Wisemans Ferry Lookout Bushland, Wisemans Ferry Tip (decommissioned – bushland parcel)

Middle Dural: Forsters Reserve

Mount Colah: Berry Park Bushland, Bimbil Avenue, Excelsior Bushland, Judith Ave Bushland, Murralong Road Bushland, Oxley Drive Park, Sue Place

Mount Ku-ring-gai: Mount Ku-ring-gai Park

Pennant Hills: Azalea Grove Bushland, Britannia Street Bushland, Observatory Park, Tristania Way Bushland

Normanhurst: Begonia Road South Bushland, Kenley Park, Normanhurst Park, Pine Street Bushland, Waitara Creek Bushland

North Epping: North Epping Oval, Woods Street Oval

Thornleigh: Dog Pound Creek Bushland, Larool Crescent Childrens Centre (bushland parcel), Larool Creek Bushland

Westleigh: Dog Pound Creek Bushland, Quarter Sessions Road Bushland, Western Crescent Playground (bushland parcel)

West Pennant Hills: New Farm Road Bushland

Wisemans Ferry: Singleton Mill Road Bushland and Wisemans Ferry Cemetery (bushland parcel)



2.0 Biodiversity Planning and Management

2.1 Biodiversity Conservation Strategy

The **Hornsby Shire Biodiversity Conservation Strategy** (2004, updated 2006) is an over-arching document that guides Council's priorities for undertaking conservation actions. Its objectives are:

- To conserve species, populations and communities of native plants and animals, and allow for their continued evolution and survival in the Hornsby Shire in context of the region.
- To achieve an improvement in the quality and extent of existing indigenous vegetation in Hornsby Shire.
- To collect and update biodiversity conservation information.
- To develop key community incentive and partnership programs to maintain biodiversity on private properties in the Hornsby Shire.
- To ensure Council activities integrate with other agencies to achieve biodiversity conservation outcomes.
- To ensure environmental planning instruments and processes provide a strategic approach to achieving biodiversity conservation outcomes.
- To maintain and improve the management of biodiversity on publicly owned land in Hornsby.
- To effectively mitigate threats to conserving biodiversity in Hornsby.
- To conserve and recreate connectivity across fragmented landscapes.
- To develop and implement effective systems to fund and manage biodiversity conservation actions.

In Hornsby Shire there are over 1,000 native plants and 388 terrestrial vertebrate animals; of these there are 26 threatened plants and 42 threatened fauna known or likely to occur.

Annually ten high priority actions are implemented from the Biodiversity Conservation Strategy. A review of actions for the period 2004-2009 was undertaken and the highest priority actions were planned for 2010-15 within that time frame. The major achievements for 2009-10 included:

- Acquisition of One Tree Reach wetland at Laughtondale through grant funds, which completes the reserve of 13 ha conserving five endangered ecological communities and habitat for 11 threatened species of fauna, including three species of bats, breeding habitat for aquatic invertebrates and fish, as well as improving the water quality of the Hawkesbury River by filtering runoff.
- Propagation of 41,026 plants following the nursery expansion last year and doubling of the plant give-aways of free native plants to residents 4 times a year to provide local native plants for bushland and to residents for their gardens.
- Undertaking in-house fauna surveys within 12 Wildlife Protection Areas to gain a better understanding of the Shire's wildlife and habitat values.
- Facilitating partnerships
 - Year 1 of the Habitat Connectivity grant program restored 4.7 ha of public and private bushland, including 41% Turpentine Ironbark Forest and Blue Gum High Forest, revegetated 4,932m² to enhance connectivity and strengthen habitat corridors, and held 4 workshops on bushland, restoration and planning attended by 65 residents

- Continuing delivery of the 'Greenstyle' grant program with Ku-ring-gai and Willoughby Councils, providing tailored assistance in home sustainability and backyard biodiversity conservation. In 2009-10 the Greenstyle program undertook home and garden assessments at 559 households across 3 LGAs. In Hornsby LGA in 2009-10 Greenstyle supplied over 2,635 native plants, six compost bins, and two native bee hives and 184 Hornsby residents signed up for a home visit..
- Planting understorey at 'Tumpinyeri' Blue Gum High Forest property at Normanhurst West School,
- Adoption of the 'Native Vegetation Communities of Hornsby Shire' report and map by Smith and Smith to update the current knowledge of vegetation in Hornsby Shire
- Completion of the 'Native Vegetation Planning Review Study' by SJB Planners to review planning controls for biodiversity conservation
- Facilitation of information workshops and commencement of an Indian Myna control group
- Bushcare celebration of 20 Years in Hornsby Shire with 879 Bushcare volunteers in 130 bushland reserves providing over 20,000 hours of work per annum.

2.2 Plans of Management for Natural Areas

In the 2009-10 year the Generic Plan of Management was adopted for Districts 5 and 7 covering 58 reserves in Berowra, Berowra Heights, Berowra Waters, Cowan, Brooklyn and Danger Island. The Plan includes policy and action plans for the various land categories. Section III of the Plan details individual maps and asset information for bushland reserves that are classified as Community land or Crown land under the care control and management of Council. This completed a lengthy process to prepare plans of management for all Council managed bushland and parks throughout the Shire based on land parcels which commenced in 2002.

Several of the significant bushland reserves in this plan of management are: Berowra Park and Turner Road Bushland, Brooklyn Park and McKell Park, and Kiparra Park on Dangar Island.



Berowra Park Bushland

2.3 Development Applications and Land and Environment Court

66 development applications were assessed for their impacts on biodiversity by the Bushland and Biodiversity Management Team during the year, down on the usual 150 p.a. Numbers decreased from the first six months to half the number of DAs received in the second six months. The most significant issue was the approval of a sand mine at Maroota which will result in the loss of 6.6 ha of Grey Gum Scribbly Gum Woodland (Community D) and included the loss of 403 individual *Tetratheca glandulosa* plants. For this DA 8.2 ha will be rehabilitated as a way of mitigating the impacts of clearing the vegetation.

2.4 Illegal Land Clearing and Tree Loss

31 bushland illegal clearing breaches were attended during the year. The Bushland and Biodiversity Team was asked to assist the Tree Management Officers when assessing the impacts of tree removal on threatened biota, especially in the case of individual and relatively small group of trees that form part of Critically Endangered or Endangered Ecological Communities (CEECs and EECs), such as Blue Gum High Forest or Turpentine-Ironbark Forest. The Team assessed 36 trees that were removed from Blue Gum High Forest and Turpentine-Ironbark Forest during the year by undertaking 'Assessments of Significance' required under the Threatened Species Conservation Act 1995, with an additional 40 native trees being approved for removal on private land by the TMOs. Some of the key issues for conservation is that CEECs and EECs occur primarily on private land, are often heavily impacted and their condition severely compromised by urban development, are poorly represented in Council's parks and reserves and National Parks estate and there is little suitable area for replanting to offset their loss. Bushland staff have been working with TMOs to minimise losses through undertaking resistographs for trees on public land to gather information to assist in tree retention.

3 Reports prepared by Dr Peter and Dr Judy Smith in 2008, were reviewed in relation to the loss of bushland and larger areas of remnant trees and taken into account when Council reviewed how its LEP conserves native vegetation:. The following is a brief summary of some of the reports' findings:

Remnant Trees of Southern Rural District of Hornsby Shire (Castle Hill, Glenhaven, Dural, Middle Dural, Galston, Arcadia and Berrilee) mapped large stands of remnant native trees capable of regenerating into bushland. *The mapping found between January 2005 and March 2007, there was an overall reduction in the extent of remnant tree stands of about 3.6 ha with most clearing having occurred in Turpentine-Ironbark Forest, Bloodwood-Scribbly Gum Woodland and Blue Gum High Forest on Wianamatta shale.*

Remnant Trees of Urban District of Hornsby Shire found the main communities represented in the remnant tree stands are the critically endangered Blue Gum Shale Forest (40% of the stands by area) and the locally significant Blackbutt Gully Forest (30%), compared to Blue Gum Shale Forest which represents only 0.2% of the remnant bushland vegetation of Hornsby Shire. Another endangered community, Cumberland Plain woodland, was only found three stands of remnant trees. Blue Gum Shale Forest was originally the most common vegetation community in the Urban District. *Between January 2005 and March 2007, there has been an overall reduction in the extent of remnant tree stands in the Urban District of about 0.7 ha. There have been reductions in six of the 15 communities. The greatest reductions were in Blue Gum Shale Forest and Blackbutt Gully Forest.*

Native Vegetation Communities of Hornsby Shire found that a total area of 15.4 ha of bushland was cleared between January 2005 and March 2007 (Table 6). Sixteen native vegetation communities in Hornsby Shire were reduced in extent over this period. Critically endangered communities have been reduced by 1.8 ha, endangered communities by 3.5 ha, regionally significant communities by 1.0 ha, locally significant communities by 0.8 ha, and common communities by 8.1 ha. The greatest reductions have been for Grey Gum-Scribbly Gum Woodland (3.8 ha), Floodplain Reedland (2.5 ha), Scribbly Gum Open-woodland/Heath (2.2 ha), Turpentine-Ironbark Forest (1.2 ha) and Peppermint-Angophora Forest (1.1 ha).

In total, the studies found that 19.7 ha of bushland and large remnant tree stands were cleared in Hornsby Shire over the 26 months between January 2005 and March 2007.



Shale Gravel Transition Forest as remnant trees at Arcadia

2.5 Fauna Survey of Wildlife Protection Areas

An in-house fauna survey of Wildlife Protection Areas was undertaken for the third season running during the summer of 2009-2010. NPWS Wildlife Atlas indicates that 20 threatened fauna species (8 mammals, 8 birds, 2 frogs and 1 reptile) listed under the NSW Threatened Species Conservation Act 1995 reside within the bushland of Hornsby Shire and a further 10 threatened species occasionally visit. Monitoring of the species present is an important tool for the effective long-term management of their habitat. Development, land clearing, exotic species and climate change are some of the key threatening processes that are likely to impact on these species' long-term survival in our bushland.

Ten monitoring sites were surveyed with procedures being fine-tuned from last season, including

- Crosslands Reserve,
- Dog Pound Creek, Hornsby,
- Mt Kuring-gai Oval Bushland,
- Turner Road Bushland, Berowra Heights,
- Waitara Creek Bushland, Normanhurst,

Galston Recreation Reserve,
 Arcadia Park Bushland, Arcadia,
 Pennant Hills Park (including Bambarra Track),
 Furber Park and Crown Land, Berowra Creek, and
 One Tree Reach Wetland (Laughtondale/ Wisemans Ferry).

17 threatened species were recorded including birds, amphibians and microbats.

Common Name
Eastern Bent-wing Bat
Powerful Owl
Eastern False Pipistrelle
Grey-headed Flying-fox
Eastern Bent-wing Bat
Glossy Black-Cockatoo
Spotted-tailed Quoll
Koala
Greater Broad-nosed Bat
Gang-gang Cockatoo
Yellow-bellied Sheath-tail Bat
Eastern Freetail-bat
Giant Burrowing Frog
Red-crowned Toadlet
Heath Monitor
Little Eagle
Little Lorikeet

The recommendations of the report included undertaking future targeted surveys for Eastern Pygmy Possum and gliders, Giant Burrowing Frog, Heath Monitor, Broad-headed Snake and other reptiles, Parrots, migratory woodland & wetland birds, Common Dunnart and Southern Brown Bandicoot, Large Forest Owls and other birds of prey and Koala.



Little Eagle (*Hieraaetus morphnoides*) – Arcadia Park (Photo: Alex Fraser)



Heath Monitor (Photo: Alex Fraser)

2.6 Vegetation Studies

Council adopted the 'Native Vegetation Communities' Report and Map 2008 by Peter and Judy Smith, following a period of public exhibition. The report mapped 34 native vegetation communities and found that 28 of the communities in Hornsby Shire are significant at national, State, regional or local level.

Ecological community in Hornsby Shire	Threatened Species Act status	Environment Protection & Biodiversity Conservation Act status
Turpentine-Ironbark Forest	Endangered	Critically endangered
Blue Gum Shale Forest (listed as Blue Gum High Forest)	Critically endangered	Critically endangered
Blue Gum Diatreme Forest (forms part of Blue Gum High Forest)	Critically endangered	
Duffys Forest	Endangered	Endangered
Rough-barked Apple River-flat Forest	Endangered	
Forest Red Gum River-flat Forest	Endangered	
Shale Gravel Transition Forest	Endangered	
Swamp Oak Floodplain Forest	Endangered	
Coastal Saltmarsh	Endangered	
Swamp Sclerophyll Forest on Coastal Floodplains (mapped as Swamp Mahogany Forest, Floodplain Paperbark Scrub and Floodplain Reedland)	Endangered	
River-flat Eucalypt Forest on Coastal Floodplains (mapped as Rough-barked Apple River-flat Forest and Forest Red Gum River-flat Forest)	Endangered	

Over 95% of the original extent of Turpentine-Ironbark Forest, Blue Gum Shale Forest and Blue Gum Diatreme Forest have been cleared on the Cumberland Plain (Tozer, 2003). Hornsby Shire has about a quarter of the remaining area of both Turpentine-Ironbark Forest (295 of 1183 ha) and Blue Gum Shale Forest (37 of 168 ha), and possibly all of the remaining area of Blue Gum Diatreme Forest (14 ha) with very little of these communities conserved in the local National Parks' reserves. Council therefore has a major role to play in the conservation of the three communities.

Staff of the Bushland and Biodiversity Team undertook 2 days of training from Dr Peter and Judy Smith in vegetation survey and analysis, and were joined by staff of Council's Tree Management Team for one day.



Bushland at Glenorie: P & J Smith

2.7 Native Vegetation Planning Review

Council identified the need to protect bushland as an important issue during the preparation of its new Local Environment Plan (LEP) in accordance with the NSW Government's Principal Local Environment Plan Standard Instrument format. The current planning controls dealing with land clearing and tree preservation do not readily translate into the new standard format.

One key issue was the current HSLEP 1994 requires development consent for 'land clearing' within all rural zonings but there is no provision for this to be translated into the new LEP, hence there is concern that there will be no control of clearing of vegetation in the 'Bushland Shire'. A second issue was that under the Exempt and Complying Development Clause development can occur without consent which may negatively impact on the protection of bushland, except for areas included in an 'Environmentally Sensitive Lands – Biodiversity map', and a standard model local biodiversity clause. There was therefore a need for Council to consider, identify and map significant vegetation in accordance with these 'additional local provisions' of the Standard Instrument. All native vegetation studies and current biodiversity

data were reviewed for this purpose, including 'The Native Vegetation Communities of the Hornsby Shire' by P & J Smith, which had been previously publically exhibited and adopted. A third key issue was the existing HSLEP 1994 Clause 19 and map for 'Bushland Protection' was inadequate, and this was reviewed with the result that three areas were recommended for removal from the map (Cherrybrook, Berowra and Cowan) and two for protection (Berry Park and Byles Creek) to be retained.

Bushland and Biodiversity worked with Council's Town Planning Services to examine bushland planning protection options to address the issues within the new Standard Instrument. SJB Planners undertook a detailed study entitled 'Hornsby Shire Native Vegetation Planning Review'. Following exhibition of the study Council adopted the preferred planning option which recommended the inclusion of the most significant vegetation at a national, state and regional level, into an Environmentally Sensitive Lands layer in the Hornsby Shire Local Environmental Plan and the adoption of a Clause to conserve trees and native vegetation both in the new LEP and through the new Development Control Plan.

2.8 Offsets Code

A one year trial of the Green Offsets code was undertaken, reviewed and reported to Council, who resolved to make minor amendments to the code. The principle of offsetting in relation to a development is where the loss of vegetation cannot be avoided, its impacts minimized or mitigated, only then can its loss be offset by protecting and conserving native vegetation elsewhere in the Shire. The one year trial was a test of the effectiveness of the policy.

The best examples of offsets are those where a developer had understood and implemented the offset concept well. A number of successful receiving sites were reviewed at Fuller Road, Kenley Park, Castle Howard Reserve, Shepherds Drive and Clement Close offsetting the loss of Blue Gum High Forest Critically Endangered Ecological Community and Turpentine Ironbark Forest Endangered Ecological Community. A less successful offset was directed through Land and Environment Court orders at Beaumont Road which included on-site protection, creekline restoration on and off-site and topsoil translocation. Parts of site have been protected, whilst parts of site were poorly implemented, with some additional restoration still to be commenced. Whilst offsets were found to sometimes be difficult to negotiate and guarantee a successful outcome, they are an additional tool for Council to utilise to protect and restore native vegetation, where the alternative would be to lose vegetation on the development site with no opportunity for conservation and restoration of sites not subject to development.

2.9 Recovery Plans

Council endorsed the draft Cumberland Plain Recovery Plan for a number of endangered ecological communities. These included 0.67 ha of Cumberland Plain Woodland mapped as remnant trees on a few private properties in the Cherrybrook area, 0.66 ha of remnant trees of Shale Gravel Transition Forest on private property in Mid-Dural, 4.7 hectares Shale Sandstone Transition Forest at Maroota, and 4 areas of River-flat Forest on Coastal Floodplains mapped as 2 subtypes – 6 ha of Forest Red-Gum River-flat Forest at Loughtondale, and 3 sites of Rough-barked Apple River-flat Forest vegetation community of 2 ha on private land at Crosslands and 5 sites of 0.84 ha of remnant trees at Crosslands, with a small area on Council land and most on private land.

3.0 Bushfire Management

The Bushland and Biodiversity Team is responsible for a variety of activities relating to bush fire management in Hornsby Shire which is a significant issue with 22,000 properties being within bushfire prone land. A large proportion of Hornsby Shire has been rated as having extreme bushfire risk and a 47 km interface occurs between public land and developed areas in the Hornsby LGA, with 27 km being Council bushland. Council is the local authority under the Rural Fires Act and is responsible for the prevention, mitigation and suppression of bush fires in the LGA, which is delegated to the RFS through a Service Agreement. Council is also a member of the Bush Fire Management Committee (BFMC) responsible for identification, planning and treatment of bush fire risk management through the Bush Fire Risk Management Plan and the Annual Fuel Management Program.

The Bushland and Biodiversity Team is primarily responsible for addressing the bush fire risk on land managed by Council. During the 2009/10 financial year the following activities were undertaken in the Hornsby LGA:

- Hazard Reduction burn program with 816 hectares burnt in 32 separate hazard reduction burns.
- Manual fuel reduction and bushland interface contract works for 44 Asset Protection Zones being installed and regularly maintained, including new APZs at Margaret and Raphael Drive
- 11 Works Access Lines were installed.
- 120 fire trail directional signs were installed
- Processing of 9 bush fire hazard complaints and implementation of RFS recommended works to reduce any hazards, including works at-
 - Avery Street, Normanhurst
 - 1135 Pacific Highway, Cowan
 - Sunset Avenue, Hornsby Heights
 - Fallon Drive, Dural: burn listed on 10/11 Fuel Management Program
 - Oxley Park, Mount Colah: Vegetation management works will be supplemented by a hazard reduction burn due to the presence of threatened species
 - Riverview Road, Dangar Island
 - Kiparra Park, Dangar Island
 - Raphael Drive, Hornsby Heights
 - Margaret Avenue, Hornsby Heights
- Maintenance of over 92 kilometres of fire trails on Council managed lands. Major upgrades to the Bambil Hamley Fire Trail and construction of the Fraser Road Fire Trail entrance, with Council coordinating and constructing significant sections of the fire trail
- Issuing of 728 fire permits for private property pile burns within the areas of the Shire where burning is allowed. The RFS also issued 62 hazard reduction certificates for private properties in the Hornsby Ku-ring-gai district.
- Council's Interface Control Line Model was updated, and staff training completed.

The Team also undertook environmental assessments for all the above programs prior to any hazard reduction activities and worked closely with the NSW Rural Fire Service (RFS) and the NSW Fire Brigade in community education and awareness programs.

3.1 Service Agreement

In May 2010 Council endorsed the new Service Agreement with the NSW Rural Fire Service. The new Agreement updated the original 2001 agreement and now covers two Rural Fire Districts, namely Hornsby and Ku-ring-gai, which have been combined into a Zone and are covered by a zoning agreement. Other major changes to the agreement are to remove the responsibility for Berowra Valley Regional Park bush fire management from Council and to streamline and standardise the documentation. The achievement of the second SA to the original signed in 2001 is an important milestone for the 2 Councils and the Rural Fire Service in co-operative management of bush fire matters.

3.2 Bush Fire Risk Management Plan for Hornsby Ku-ring-gai District

Hornsby Ku-ring-gai Bush Fire Management Committee prepared a Bush Fire Risk Management Plan (BFRMP) which covering public and private lands. The Bushland and Biodiversity Team co-ordinated its preparation on behalf of the Hornsby Ku-ring-gai BFMC.

The BFRMP identifies community assets at risk and plans a five-year program of coordinated multi-agency treatments to reduce the risk of bush fire to the assets. Treatments include hazard reduction burning, mown areas, community education, fire trail maintenance and establishing community fireguard groups. Annual programs to implement the treatments identified in the plan will be undertaken by the relevant land managers and fire fighting authorities.

The aim of the BFRMP is to minimise the risk of adverse impact of bush fires on life, property and the environment to:

- reduce the number of human-induced bush fire ignitions that cause damage to life, property and the environment;
- manage fuel to reduce the rate of spread and intensity of bush fires, while minimising environmental/ecological impacts;
- reduce the community's vulnerability to bush fires by improving its preparedness; and
- effectively contain fires with a potential to cause damage to life, property and the environment.

Extensive community consultation occurred for the Plan preparation with briefings for special facilities (schools, aged care facilities etc.) and 9 community information barbeques held throughout the two LGAs. The draft Hornsby-Ku-ring-gai Bushfire Risk Management Plan was publicly exhibited in December 2009 and the final Plan adopted by Council in May 2010.



Hazard Reduction burn

3.3 Building Bushfire Resilient Communities Grant

The grant from the National Disaster Mitigation Program of \$90,000 funded on ground works and community education. Installations of Works Access Lines of 2657 m were established to facilitate access for Hazard Reductions burning at:

1. Azalea Grove, Pennant Hills
2. Azalea Grove 2/ Malton Road, Pennant Hills
3. Dog Pound Creek, Higgins Place and Russell Crescent, Westleigh
4. Florence Cotton East/ Frederick Street, Hornsby
5. Florence Cotton West/South, Pinera Street, Hornsby
6. Gleneagles Crescent/ King Road, Hornsby
7. Normanhurst Park North, Normanhurst
8. Old Mans Valley/ Manor Road, Hornsby
9. Waitara Creek/ Clovelly Road, Hornsby
10. Waitara Creek North/ Valley Road, Hornsby

Community information nights and follow up informal barbeques were held at:

- Beecroft
- Pennant Hills
- Dural/ Cherrybrook
- Hornsby
- Hornsby Heights
- Berowra

Over 200 residents were invited to information nights and community barbeques through letterbox drops. Sixty residents attended educational activities across the seven events during June and July 2010 and presenters from Council, the Rural Fire Service and the NSW Fire Brigades discussed how to prepare a Bushfire Survival Plan.



4.0 Bushland Management

4.1 Contract Bush Regeneration Program

Council's bushland regeneration program treated over 50 long term sites on Council owned land and Crown land where Council is trustee or where management devolved to Council. Some sites were on DECCW land that is co-managed with Hornsby Shire Council in Berowra Valley Regional Park managed with under an agreement. Additional bushland regeneration sites included grant and offset projects. Approximately 90% of the sites were contracted to 11 bush regeneration companies under a tender finalised in August 2009. Works covered 123 ha restoring small degraded urban bushland remnants to the mitigation of weed sources that threatened larger and more pristine bushland reserves.

Due to the large number of sites covered by the program and the project management requirements to adequately supervise the contract bush regeneration companies, a comprehensive review of the program was undertaken prior to commissioning the new tender works in August. This exercise utilised a broad range of data from an external review of the program '*Bushland Condition and Priority Ranking for Bushland Restoration in Hornsby Shire*' by UBM Consultants Pty Ltd, a GIS review, a review of Plans of Management for Community and Crown Land.

BUSHLAND REGENERATION SITES

1. Azalea Grove Bushland Green Offset – stage 2
2. Chilworth Recreation Reserve, Devlins Creek Reserve and Beecroft Reserve
3. Berowra Park Bushland and Turner Rd Bushland
4. Beecroft Road Bushland and Blaxland Rd
5. Dog Pound Creek Bushland and Ginger Meggs Park - Bluegum Forest
6. Brickpit Park, Thornleigh
7. Near Brennan Close Bushland - Bridge Road, Hornsby
8. The Saltpan at Brooklyn -Cole Street
9. Byles Creek - Britannia St Bushland and Azalea Grove Bushland
10. McKinley Place and Lambe Place - Callicoma Walk, Cherrybrook
11. Calna Creek - Murralong Rd Hornsby Heights
12. Fagan Park - Carrs Bush, Arcadia
13. Cherrybrook High Bushland
14. The Lakes of Cherrybrook Bushland
15. Public Reserve 139X Boundary Rd Pennant Hills known as Cherrybrook Road Bushland
16. Crosslands Reserve to Galston Gorge
17. Dog Pound Creek Bushland, Westleigh
18. Fearnley Reserve, Beecroft
19. Tim Brownscombe Reserve, Galston
20. Fishburn Road and unmade Bevans Rd Bushland, galston
21. Flame Tree Close Bushland, Cherrybrook
22. Florence Cotton Bushland Reserve, Hornsby
23. Margaret Ave Bushland
24. Arrionga Road Bushland Galston Gorge
25. Galston Park, Galston Gorge
26. Galston Recreation Reserve, Galston Gorge
27. Greenway Park Bushland, Cherrybrook

28. Edgeworth David Park, Hornsby Creek Catchment
29. Hornsby Park, Manor Road Bushland, Old Mans Valley and Rosemead Road Bushland
30. Kenley Park, Normanhurst
31. Kent Street Reserve, Epping
32. Kirkham Road Green Offset, Cheltenham
33. Unfunded Regional Noxious Weed Projects
34. Malsbury Rd and Milsons Pde, Normanhurst
35. McKell Park, Brooklyn
36. Mills Avenue Bushland and Mills Park, Asquith
37. Mt Ku-ring-gai Hard Fill, Mt Ku-ring-gai
38. Netherby Street Bushland, Wahroonga
39. One Tree Reach Wetland, Laughtondale
40. Osborn Rd, Normanhurst
41. Pampas Grass sites
42. Erlestoke Park, Upper Pyes Creek Bushland and Pyes Creek Bushland, Dural
43. Ray Park , Midson and Plympton Road Bushland, Eastwood
44. Reddy Park, Hornsby
45. Regional Projects Vines, Tussock Paspalum & Olive
46. Rofe Park Bushland , Hornsby Heights
47. BVRP - Combora Circuit Bushland, Sams Creek Berowra, Stewart Ave Hornsby, Upper Berowra Creek, Zig Zag Creek
48. Upper and Middle Terrys Creek Bushland, Dence Park, Stanley Road Bushland, Epping
49. Waitara Creek Bushland and Normanhurst Park, Normanhurst
50. Westleigh Drive Bushland and Duneba Drive Bushland South, Westleigh
51. Wisemans Ferry Recreation Reserve- Riparian zone
52. Wongala Crescent, Pennant Hills

In addition to regeneration of 123 ha, revegetation of 1500 m² occurred using 2900 plants. Maintenance of the native vegetation landscaped zones at 12 Catchment Remediation Rate (CRR) sites was carried out on behalf of the Water Catchments Team.

Funding included Section 94 contributions for capital upgrade of 18 sites at the cost of \$182,000, Council funds of \$100,000 were expended on maintenance works, grant and offset funds for Endangered Ecological Communities of \$120,000 and CRR funds of \$65,000 for CRR sites.



Monitoring trial for different techniques of Ehrharta **treatment**

4.2 Berowra Valley Regional Park Working Group

Gazetted as a regional park on 27 March 1998, the park is owned and primarily managed by the National Parks and Wildlife Service (NPWS) and Hornsby Shire Council undertakes specific roles within the park. A Working Group of NPWS (DECCW) and Council's Bushland and Biodiversity Team met regularly during the year to ensure the smooth running of the Park by the two agencies for which Council prepared its annual service plan. Crosslands Reserve and its access road is managed by Council as 50% of the Reserve under Council's direct ownership. The Crosslands water supply pipeline was completed in 2009-10 funded 25% by Council. Crosslands Stage 1 amenities upgrade was completed during the year funded through Section 94 funds at a cost of \$230,000. Council conducted many of the interface activities where Council land adjoins Berowra Valley, including maintenance of existing and installation of four new Catchment Remediation devices, training and co-ordination of 42 Bushcare groups and management of 2 strategic walking tracks and 10 contract bush regeneration sites.

4.3 Noxious Weed Control

Grants were received for noxious weed inspections and Regional Noxious Weed programs. This enabled the program to occur.

Target species included Tussock Paspalum mapping, monitoring and follow up treatment at Yatala Road, Mt Ku-ring-gai, Berowra, Old North Road, Dural, McKinley Road Bushland and 3 sites on the Pacific Highway under a Regional Noxious Weed grant. Noxious vine control was carried out at Hull Road, Pennant Hills, Boundary Road, Cherrybrook, Pyes Creek, Cherrybrook, the Comenarra Parkway, Thornleigh and Epping Road under a Regional Noxious Weed grant. African Olive was mapped and treated.

Proactive noxious weed activities included 644 private property inspections under the Industry and Investment Grant. The Bushcare Newsletter promoted African Olive control and the Bushland Shire News promoted treatment of vine weeds.

Responsive noxious weed visits and education was undertaken as phone, email and written requests were received. 206 noxious weed inspections were made of private properties and 159 additional enquiries were answered during 2009-10. One property in Normanhurst required noxious weed control to be carried out by Council under Section 20 of the Noxious Weeds Act. The majority of weeds on private property were privet (*Ligustrum lucidum* and *Ligustrum sinense*), morning glory (*Ipomea indica*), lantana (*Lantana camara*) and camphor laurel (*Cinnamomum camphora*) and Trad (*Tradescantia fluminensis*).

Two committee meetings of the Sydney North Regional Noxious Weeds Committee were attended to keep aware of new grant and regional weed priorities and initiatives.

LISTED NOXIOUS WEEDS FOR HORNSBY SHIRE COUNCIL

COMMON NAME	BOTANICAL NAME	CLASS
Alligator weed	<i>Alternanthera philoxeroides</i>	3
Asparagus fern (349Kb)	<i>Asparagus aethiopicus</i>	4
Balloon vine (154Kb)	<i>Cardiospermum grandiflorum</i>	4
Bamboo (Rhizomatous - running) - (121Kb)	<i>Phyllostachys</i> spp.	4
Bitou bush/Boneseed	<i>Chrysanthemoides monilifera</i>	3
Blackberry (218Kb)	<i>Rubus fruticosus</i> (agg.spp.)	4
Black Knapweed	<i>Centaurea nigra</i>	1
Bridal creeper	<i>Myrsiphyllum asparagoides</i>	4
Broomrape	<i>Orobanche</i> spp	1
Cabomba (except Pink Cabomba)	<i>Cabomba</i> ssp - except <i>Cabomba furcata</i>	5
Camphor laurel (130Kb)	<i>Cinnamomum camphora</i>	4
Cape broom (130Kb)	<i>Genista monspessulana</i>	3
Cape ivy (181Kb)	<i>Delairea odorata</i>	4
Castor oil plant (214Kb)	<i>Ricinus communis</i>	4
Cat's claw creeper (87Kb)	<i>Macfadyena unguis-cati</i>	4
Climbing asparagus (281Kb)	<i>Asparagus plumosus</i>	4
Giant reed/Elephant grass (142Kb)	<i>Arundo donax</i>	4
Green cestrum (173Kb)	<i>Cestrum parqui</i>	3
Harrisia cactus	<i>Harrisia</i> spp	4
Hawkweeds	<i>Hieracium</i> spp	1
Horsetail	<i>Equisetum</i> spp.	1
Karoo thorn	<i>Acacia karoo</i>	1
Kochia	<i>Kochia scoparia</i> except subsp. <i>Tricophylla</i>	1
Lagarosiphon	<i>Lagarosiphon major</i>	1
Lantana (118Kb)	<i>Lantana camara</i>	4
Ludwigia/Water Primrose (92Kb)	<i>Ludwigia peruviana</i>	3
Madeira vine (206Kb)	<i>Anredera cordifolia</i>	4
Mexican feather grass	<i>Nassella tenuissima</i> syn <i>Stipa tenuissima</i>	1
Miconia spp	<i>Miconia</i>	1
Morning glory (blue)	<i>Ipomea indica</i>	4
Morning glory (coastal) - (196Kb)	<i>Ipomea cairica</i>	4
Ochna (115Kb)	<i>Ochna serrulata</i>	4
Pampas grass (198Kb)	<i>Cortaderia</i> spp	4
Parthenium weed	<i>Parthenium hysterophorus</i>	1

Pellitory (115Kb)	Parietaria judaica	4
Prickly pears	Opuntia spp. except O. ficus indica	4
Privet - broadleaf (183Kb)	Ligustrum lucidum	4
Privet - narrowleaf (230Kb)	Ligustrum sinense	4
Rhus tree (152Kb)	Toxicodendron succedaneum	4
Salvinia	Salvinia molesta	2
Scotch/English broom	Cytisus scoparius	4
Senegal tea plant	Gymnocoronis spilanthoides	1
Siam weed	Chromolaena odorata	1
Spotted Knapweed	Centaurea maculosa	1
St John's Wort	Hypericum perforatum	4
Turkey rhubarb (222Kb)	Acetosa sagittata	4
Wandering Jew/ Trad (156Kb)	Tradescantia fluminensis	4
Water hyacinth (193Kb)	Eichhornia crassipes	2
Water lettuce	Pistia stratiotes	1
Willow	Salix ssp - other than S.babylonica / S. X calodendron / S. X reichardt	5



Pampas Grass: Adam Burrowes

4.4 Walking Tracks and Bushland Access

Council has over 49 km of formal and informal bushwalking tracks. Formal tracks include:

- Beecroft-Cheltenham Link Track, Beecroft-Cheltenham
- Historic Pioneers' Track, Epping
- Bluegum walk, Hornsby
- Mangrove walk, Brooklyn
- Callicoma walk, Cherrybrook
- Carrs Bush walk, Galston
- Crosslands salt marsh walk, Crosslands
- Mambara walk, Pennant Hills
- McKell Park walk, Brooklyn
- Terrys Creek walk, Epping

In 2009-10 new tracks and major upgrades funded by grants were completed at Bar Island, Terrys Creek and Stage 3 of the Cheltenham Beecroft Link Track sponsored by Transurban Hills M2. Links to the Great North Walk were constructed through a grant and detailed works specification prepared for Hornsby's Heritage Depression Era Steps, with the third stage of the steps being re-discovered. Minor works occurred on the Blue Gum Track, Callicoma Track, Mambara Track, Pioneer Track and Brian Avenue Track, Waitara Creek Bushland. Quotes were obtained for Bar Island Jetty reconstruction in consultation with the Aboriginal community.

Terrys Creek walk through Blue Gum High Forest, rainforest and bushland from Vimiera Park Eastwood to Epping



4.5 Feasibility investigation of Mountain Bike Tracks

Council resolved to investigate the development of mountain bike (MTB) trails in Hornsby Shire following a need expressed in large number of submissions to the 'Hornsby Shire Unstructured Recreation Strategy'. The Bushland and Biodiversity Team commissioned a preliminary report from World Trail Australia (WTA). Suitable sites for cross-country 'single track' included Old Mans Valley and the Hornsby Quarry lands, Joes Mountain, Tunks Ridge, Ginger Meggs Park, Dog Pound Creek and Hayes Park Galston. Further environmental concerns expressed by conservation groups about the impact of mountain bike recreation in reserves containing Blue Gum Glen Forest (part of Blue Gum High Forest CEEC) led to a more detailed assessment these sites and others by staff during 2009-10.

5.0 Bushcare and Community programs

5.1 Bushcare

Bushcare volunteers restored and enhanced native vegetation and habitat across in Council's Bushland Reserves across the Shire. 57 new Bushcare volunteers signed up during this period taking numbers to 879 volunteers in 2009-10. The number of groups increased from 121 to 131 during the year. Bushcare volunteers contributed over 20,000 hours of work during 2009-10 which was valued by the Sydney Metropolitan Catchment Management Authority as contributing \$639,630.

Bushcare celebrated its 20th year in Hornsby Shire at the Annual Workshop in December 2009. Nine Bushcare members received 20 year awards, two received 15 year awards and four received special achievement awards for retiring volunteers. Two perpetual awards were given for 'the Golden Trowel' to the Roselea – Bambara Group for achieving the most Bushcare hours and the Nursery Award for exceptional work to Frances Scarano.

Bushcare held 39 training and community events during the year and there were 521 attendances. Training is compulsory for volunteers to receive and retain their accreditation. Other training supports Bushcare and Greenstyle ongoing learning and is provided with Willoughby and Ku-ring-gai Councils. Training included 6 Bushcode Workshops, 4 Bushcode Refresher Workshops, 2 TAFE Bushcare Essentials Courses, 2 TAFE Bushcare Advanced Courses and the Bushcare Annual Workshop. Community events included National Tree Day, 1 Frog and Frog Habitat Workshop, 1 Native Wildlife Workshop, 1 Fauna Friendly Garden Workshop, 1 Threatened Species Workshop, 2 Bird Watching Workshops, 2 Grasses and Groundcovers Workshops, 1 Eucalypt Identification Workshop, 1 Pools to Ponds Workshops and 1 Weed and Native Look-alikes Workshop.

Bushcare Month in October gave 14 groups the opportunity to promote their achievements and hold an open day. Council supported the groups through advertising open days in the local media, website, banners on site and through a pamphlet drop and assisting with a trainer, a bbq or morning tea.



Bambara Bushcare Group

Hornsby's Bushcare volunteers signed up to ClimateWatch as citizen scientists to observe and record indicator plant and animal species. ClimateWatch seeks to engage the community in the scientific process to gather large scale data on Australia's unique flora and fauna across a fragmented and diverse landscape that could have extinction rates up to 50% in some areas due to climate change.



Hedgehog Grass: Barry Lees

Earthwise cottage activities and projects

The Earthwise cottage was used as a venue to host plant giveaways, staff meetings and workshops. The site is an example of a retrofitted sustainable cottage in the making, whilst showcasing sustainable improvements it is limited by size of workshops to 18 people in the meeting space. This year it was the venue for 26 meetings, 10 Bushcare training events, 2 Gardens for Wildlife workshops, 3 nursery open days, 78 nursery volunteer days, and 4 Ryde TAFE student tours.

Projects included Transurban and Roselea Grant. Transurban project included a corporate weeding day for staff of Transurban Hills M2 where they were joined by Council staff, following upon the opening of the new walking track system in the Beecroft and Chilworth Reserves, now known as the Beecroft Cheltenham Link Track, which consolidated the tracks throughout the reserve and introduced interpretative and directional signage. A user survey was carried out of the track system.

The Roselea Bushcare Grant was completed during the year which involved contractors restoring a section of degraded creek line. In the major storm event in February 2010 this work was severely damaged. The Roselea Bushcare Group was successful in obtaining a second grant for \$18,000 to restore the damaged section of creek and extend the restoration work.

5.2 Community Nursery

The community nursery continued to provide high quality provenance grown stock to the wider community through open days with a total of 5386 plants distributed to 1317 residents. From 2009 onwards the nursery has provided plants to all residents of the shire on an annual basis. The nursery despatched 30058 plants for the year.

The nursery showcased best practice operations across the wider community through many initiatives including full water recycling system capturing on site runoff rainfall, solar power, minimal waste production, recycling of materials and a low chemical reliance.

Following a significant expansion in the final hardening off stage for nursery stock last financial year, the nursery has now been able to produce higher quality tubestock due to the increased solar exposure of this new expanded area.

This financial year also saw the nursery continue to exceed production units in excess of 40,000 plants. This figure is coupled with similar volunteer hours to the previous financial year in order to achieve this volume. The Community Nursery had 41 volunteers who propagated 41,000 native plants and contributed 2636 hours work on 77 days valued at \$79,080.

Significant rainfall events both in February and late May into early June allowed pre ordered stock to be planted into near ideal conditions for establishment in the field.

The nursery also continued to foster and maintain relationships with other councils and industry professionals including Fairfield Council with which there is a strong exchange program continuing, an ongoing educational partnership with Northern Sydney Institute of TAFE Ryde College and technical assistance to a variety of customers across the community within the Hornsby Shire.

The nursery continued to maintain its membership with the Nursery Garden Industry of Australia and remained an Accredited Nursery through the Nursery Industry Accreditation Scheme of Australia.



Nursery open day- plant give away

5.3 Guided Bushwalks

Council's free Guided Bushwalks program continued strongly this year. A total of 33 activities were undertaken for the period with a total of 448 participants involved in the program from July 2009 to June 2010. A diversity of activities were undertaken within the program including children's spotlighting for nocturnal fauna, nature photography, Old Mans Valley Cemetery and a wide variety of general bushwalks of varying lengths and grades of difficulty in order to appeal to the wider community. The program continues to provide and promote the education of bushland themes to the wider community.

5.4 Habitat Connectivity

The Habitat Connectivity grant of \$100,000 funded by Environmental Trust has allowed Council to expand and improve on partnerships with local landowners with the aim of enhancing vegetation habitat connectivity on private and public land. Private property included Gylar property 16 Osborn Rd Normanhurst; Benedictine Monastery, Arcadia, Marymount Centre, Castle Hill; and 12 Fishburn Rd, Galston. Public property included Rd, Galston; Sunnyridge Rd, Arcadia; Osborn Rd verge, Normanhurst; and Cherrybrook Technical High School.

Year 1 of the grant in 2009-10 resulted in restoration of 4.7 ha of public and private land. 41% of this total occurred in endangered and critically endangered communities of Sydney Turpentine Ironbark Forest and Blue Gum High Forest on rural and urban land. It also facilitated 4,932m² indigenous plantings across 4 locations in Hornsby Shire to enhance connectivity and strengthen habitat corridors.

The program also facilitated training and education to restore remnant vegetation on private and public land. Four workshops were delivered on various environmental topics related to vegetation restoration. A total of 65 residents and land managers participated in training and education within the year.

The program facilitated preparation of 7 Property Management Plans for rural properties and 2 Vegetation Management Plans for the monasteries. It also implemented existing Plans on school, urban and rural properties.



Planting a habitat corridor at St Benedict's Monastery Arcadia

5.5 National Tree Day

Three sites conducted a National Tree Planting Day this year including Short Street, Cheltenham Oval and Brooklyn Oval with a total of over 125 volunteers and 1110 trees planted.

This was one of our biggest years with 21 schools requesting plants for their school ground NTD with 550 plants donated from the community nursery specifically chosen to suit their needs, soil type and area.

5.6 Greenstyle

Greenstyle is a joint Council project between Hornsby, Kuring-gai and Willoughby Councils funded by the Environmental Trust which aims to increase biodiversity on private property and assist residents to live more sustainably in their homes. The target audience is the time poor 25-55 year age group and in particular those residents who live adjacent to bushland and riparian areas.

The program has enabled positive change toward increased biodiversity and sustainability in individuals and their homes through:

- one-on-one home sustainability assessments
- advice tailored to individual needs
- an information kit
- access to discounts from local 'green' businesses and suppliers
- a website with information and program updates
- free native plants
- events, training and workshops

Greenstyle was promoted through local newspapers (Advocate, Bushland Shire News, Northern District Times), distribution of brochures and applications forms to local libraries and council buildings and through targeted mailouts. Two banners have also been displayed in prominent public areas in Hornsby Shire.

From the Hornsby LGA, 184 participants have signed up to join in the program for a home assessment. Of these 14% are from non English speaking backgrounds. During this time there have been 65 workshop and training events across three council areas for participants. Some features of the program include

- a one-stop-shop Greenstyle website,
- Greenstyle calendar of events across 3 councils,
- regular newsletter to participants across the three council areas
- an incentive program of giveaways (including native bee hives, free plants and compost bins) to residents undertaking projects in their homes

The program offers a unique opportunity to receive in home advice from a Council officer on a range of environmental topics for those residents that have little time and opportunity to research the answers for themselves. Change has occurred amongst those that would otherwise find it too difficult or didn't know where to start. For instance many residents have planted native gardens and have been provided with the plants. Many of these were not familiar with

the benefits of a native garden and were able to take advantage of the plants available through the council nursery. Vouchers for plants from the Council nursery, totaling 2635, have been given to Greenstyle participants. Of these, 1995 plants have so far been collected and planted. 37 properties adjoin bushland, 24 adjoin a creek and 12 adjoin a remnant Blue Gum or Turpentine-Ironbark remnant. Some have created wildlife gardens and re-vegetated in areas of Blue Gum High Forest or undertaken backyard bushcare and joined up as a Bushcare volunteer. Others have installed nest boxes, established vegetable gardens and put in compost heaps (123), worm farms and 7 have converted their pool to a pond.

110 properties residents have installed rain water tanks, and 85 installed solar hot water or heat pump hot water systems. Residents have taken advantage of Government rebates to install insulation and solar hot water. Others still, have been informed of the Australian Government Green Loans program, enabling them to make more expensive changes to their homes. 78 have installed solar panels.

66% of participants in the program indicated they have not previously been involved in a council program.

	Before Greenstyle	After Greenstyle 1 year later
Average water usage	479.65 kilolitres	412.71 kilolitres
Average electricity usage	26.8 kW hours	25.5 kW hours
Average gas usage	55.2 MJ	169.2 MJ

Based on data collected at first visit there was a general decrease in electricity usage at the current time from the same time the previous year. There was also a general decrease in water usage from the previous year, but there was an increase in gas usage. This was to be expected as people switch to gas as a cleaner alternative for heating and hot water.



Dartford Rd Backyard bushcare



Rainwater tanks in Pennant Hills

6.0 Budget and Strategic Issues

6.1 Grants

Due to a decrease in developer contributions from Section 94 the Bushland and Biodiversity Team has actively applied for a substantial number of grants during 2009-10 to fund environmental works required by the Biodiversity Conservation Strategy, the Bushfire Risk Management Plan, the Plans of Management for Community and Crown Land, the Bushland and Biodiversity Education Plan and the Unstructured Recreation Strategy.

Grants received included:

- Fire Trail and APZ funding \$221,500 (includes Bambil Hamley, Fraser Rd, Berkeley Fire Trails, APZs Margaret, Raphael Drive)
- Building Bushfire Resilient Communities \$60,000
- Estuarine and migratory birds \$25,000
- One Tree Reach Acquisition \$90,900
- Noxious Weeds \$25,134
- HNCMA CFOC \$47,809
- Bar Island Track and Midden Protection \$29,210
- Bar Island Jetty \$32,600 (additional to original \$30,000)
- Greenstyle \$80,350 (funds held by Ku-ring-gai Council)
- One Tree Reach Restoration Stage 2 \$15,062
- WASIP \$220,000
- Total \$767,215

Grant works undertaken during the year:

Project	Expenditure	Income
Noxious Weed Inspectorial	4,514	-20,134
Bar Island track and midden protection	16,524	
Transurban Sponsorship Beecroft Reserve	18,379	-20,909
One Tree Reach Acquisition		-98,440
Catchment Connections Terrys Creek	2,016	
Terrys Creek Walking Track	25,322	-28,000
Greenstyle	6,078	
Habitat Connectivity	35,986	-30,000
Great North Walk Links	59,373	-29,576
Regional Noxious Weeds Grants	4,285	-5,000
HNCMA Caring For Our Country Grants	19,586	-47,809
Fire Trails	172,512	-251,800
Bushfire Asset Grant	14,935	-30,000
WASIP	185,000	-220,000
Total	564,510	-752,092

6.2 Offsets

During 2009-10 the Bushland and Biodiversity Team received offset funds of \$89,000 as a new emerging source of income to fund environmental rehabilitation works. An issue yet to be resolved is the need for offset receiving sites for Blue Gum High Forest.

6.3 Broader Community Consultation

Bushland Management Advisory Committee continued in its role to advise Council but has become more strategic in its focus and during 2009-10 it commented on the review of the Biodiversity Action Plan, the Hornsby Housing Strategy and made significant input to the investigation of Mountain Bike Trails in the Shire.

Australasian Plant Conservation Journal features Hornsby Council in the respected quarterly journal December 2009 – March 2010. Council is seeking to promote its community bushland and restoration programs more broadly to the community through an extended article and cover photograph. The journal is published by the Australasian Network for Plant Conservation, an NGO whose website is hosted at the Australian National Botanic Gardens portal at <http://www.anbg.gov.au/anpc/index.html>.

Appendix 1: Community Nursery Annual Report

Hornsby Shire Council Community Nursery

Yearly Report for 2009-2010



Blue Gum High Forest Restoration "Tumpinyeri" Normanhurst West Public School (photo- A.Blissett)



EXECUTIVE SUMMARY

Hornsby Shire Council's Community Nursery is an integral part of the Hornsby Bushcare Program, operating within the Bushland and Biodiversity Team, (Environment Division).

The nursery aims to showcase best practice operations across the wider community. This is achieved through many initiatives including full water recycling system capturing on site runoff rainfall, solar power, minimal waste production, recycling of materials and a low chemical reliance.

Following a significant expansion in the final hardening off stage for nursery stock last financial year the nursery has now been able to produce higher quality tubestock due to the increased solar exposure of this new expanded area.

This financial year also saw the nursery continue to exceed production units in excess of 40 000 plants. This figure is coupled with similar volunteer hours to the previous financial year in order to achieve this volume.

Significant rainfall events both in February and late May into early June allowed pre ordered stock to be planted into near ideal conditions for establishment in the field.

The nursery also continues to foster and maintain relationships with other councils and industry professionals including Fairfield Council of which there is a strong exchange program continuing, an ongoing educational partnership with Northern Sydney Institute of TAFE Ryde College and technical assistance to a variety of customers across the community within the Hornsby Shire.

OVERVIEW

The Hornsby Community Nursery aims to provide native plants to the Hornsby Shire through Community programs such as the Bushcare Volunteer Program, Community Open Day/Giveaway days, Greenstyle Program, Citizenship Ceremonies, Schools, community groups and a variety of environmental workshops, events and activities across the Shire including National Tree Day.

The nursery also provides provenance locally collected stock to bushland restoration projects including Bushland Operations' works, CRR Water Catchment devices, Parks Department projects and other projects that are run within Council's core business.

The nursery aims to encourage the community to learn about the values of native plants, for biodiversity conservation goals, and to support Councils projects with the provision of sound environmental restoration techniques and technical advice to Council and associated project staff.

The nursery operates under the main outcomes of the Hornsby Biodiversity Conservation Strategy, the Environmental Education Strategy and Bushland Education Strategy and the Bushland and Biodiversity Team Action Plans.

The nursery operates on a recurring budget of 16K (operational) per annum and aims to achieve an income of 15K per year to support the ongoing maintenance of the site and required resources. The nursery operates under the Bushland and Biodiversity Community Programs Team, with one full time Nursery Co-ordinator, and approximately 40 dedicated volunteers.

The nursery achieved accreditation with the NIASA (Nursery Industry Accreditation Scheme Australia) complying with strict standards of environmental best practice nursery management. It has maintained accreditation since 2005, and aims to continue accreditation as a showcase of best practice to other nurseries across NSW. The Hornsby Community Nursery was the first local government run nursery to achieve this accreditation.

The information recorded in this report is for the financial year 2009-2010 and illustrates the various areas that the nursery operates.

VOLUNTEER AND PLANT PRODUCTION STATISTICS

NURSERY VOLUNTEER PROGRAM:

VOLUNTEER HOURS	VOLUNTEER HOURS WITHIN THE NURSERY
Wednesday Volunteers (578 total individual participant visits by 21 people)	1878
Saturday volunteers (199 total individual participant visits by 18 people)	645
TOTAL HOURS	2523
NO. VOLUNTEERS	
Active volunteers for the year: (21 on Wed: 18 on Sat)	39
New Volunteers joined Program:	4

PLANT PRODUCTION **Production**

Seed lots collected:	62
Number of seed lots propagated:	152
[Provided 90% of total production]	
Number of cuttings propagated (& no. of spp.):	4332 (44)
[Provided 10% of total production based on an average 93% cutting strike rate]	
<u>Total Number of tubestock produced July 2009- June 2010-</u>	41026

Plants Supplied

Total Plants Dispatched for Year: Grand Total: **30058**

Total Number of residents that received plants through Nursery Open Days and Community Fun Days:

Grand total: **1317** (5386 plants)

Projected square metres Revegetated

[An average of 1 plant per square metre]

Grand Total: **3** hectares

PLANT DISTRIBUTION

Bushcare Plants 2009-2010 by Catchment or Area Total 3944

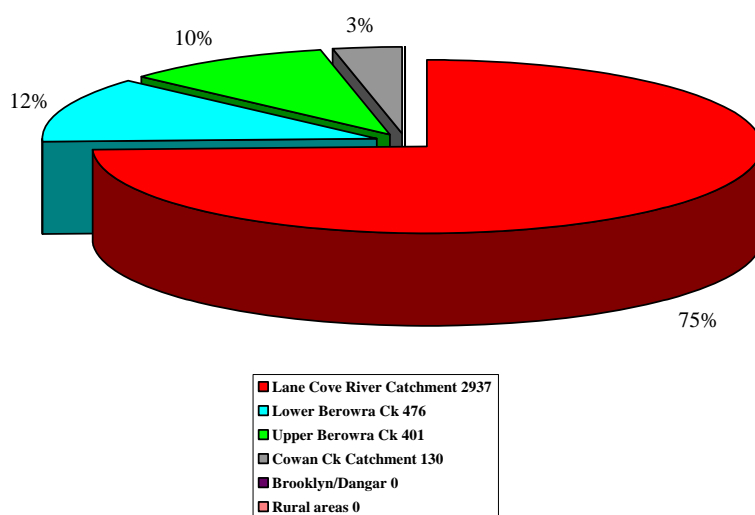


Fig. 1. Plants utilised by Hornsby Bushcare Program 2009-2010

OTHER COUNCIL PROGRAMS AND PLANT RECIPIENTS

Table 1. Plant sales to internal Council projects and associated environmental programs

Customer	No. of Plants	\$
Bushland & Biodiversity	6609	\$9095.00
Open Days- Plants to Residents	5836	
Catchment Remediation Rate	4827	\$6,236.10
Bushcare	3944	
Other (incl. "Greenstyle" & "Landcare")	2710	\$1319.50
Parks Department	2701	\$3,849.00
National Tree Day 2009	1077	
Schools	848	
Citizenship Ceremonies	768	\$852.00
Donations	738	
TOTALS	30058	\$21,351.60 (14496 plants)

Plant Distribution 2009-2010

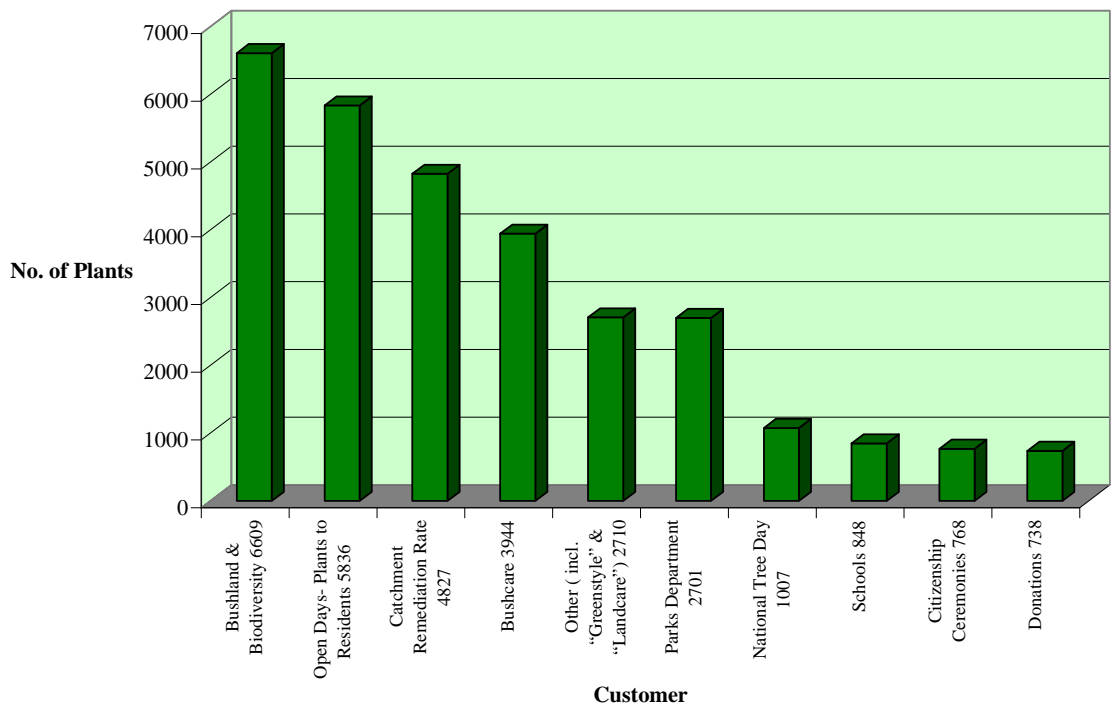


Fig. 2. Total distribution of plants by customer area

Total Distribution of Plants across the Hornsby Shire by catchment or area 2009-2010

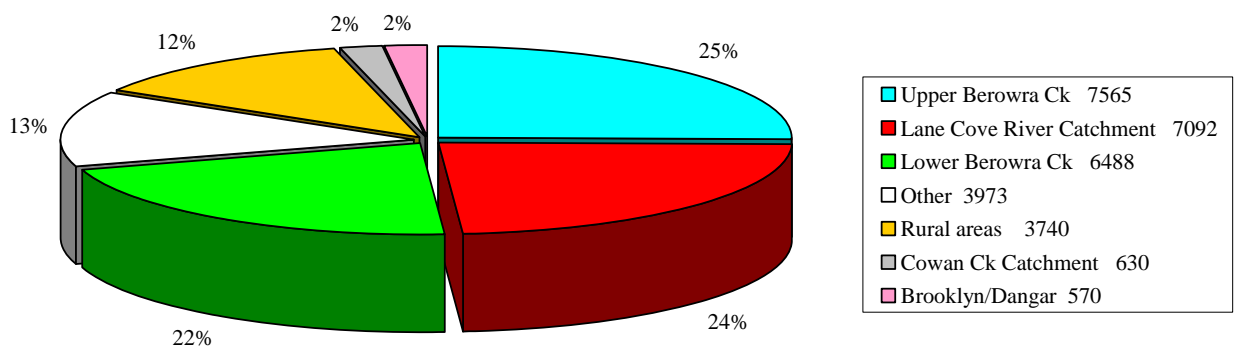


Fig. 3. Distribution of plants across the Hornsby Shire.

Table 2. Breakdown of plants by customer and area distributed to.

Bushland & Biodiversity 6609

Lane Cove River Catchment	1784
Lower Berowra Ck	605
Upper Berowra Ck	3280
Cowan Ck Catchment	400
Brooklyn/Dangar	300
Rural areas	240

Open Days 5836

Lane Cove River Catchment	1065
Lower Berowra Ck	1709
Upper Berowra Ck	2112
Cowan Ck Catchment	
Brooklyn/Dangar	
Rural areas	950

CRR 4827

Lane Cove River Catchment	550
Lower Berowra Ck	3627
Upper Berowra Ck	150
Cowan Ck Catchment	100
Brooklyn/Dangar	
Rural areas	400

Bushcare 3944

Lane Cove River Catchment	2937
Lower Berowra Ck	476
Upper Berowra Ck	401
Cowan Ck Catchment	130
Brooklyn/Dangar	
Rural areas	

Other- Donations, Citizenship, Greenstyle 4216

Lane Cove River Catchment	
Lower Berowra Ck	
Upper Berowra Ck	
Cowan Ck Catchment	
Brooklyn/Dangar	
Rural areas	650
Other	3566

Parks Dept 2701

Lane Cove River Catchment	26
Lower Berowra Ck	3
Upper Berowra Ck	1172
Cowan Ck Catchment	
Brooklyn/Dangar	
Rural areas	1500

National Tree Day 1077

Lane Cove River Catchment	400
Lower Berowra Ck	
Upper Berowra Ck	
Cowan Ck Catchment	
Brooklyn/Dangar	270
Rural areas	
Other (various schools)	407

Schools 848

Lane Cove River Catchment	330
Lower Berowra Ck	68
Upper Berowra Ck	450
Cowan Ck Catchment	
Brooklyn/Dangar	
Rural areas	

ACHIEVEMENTS

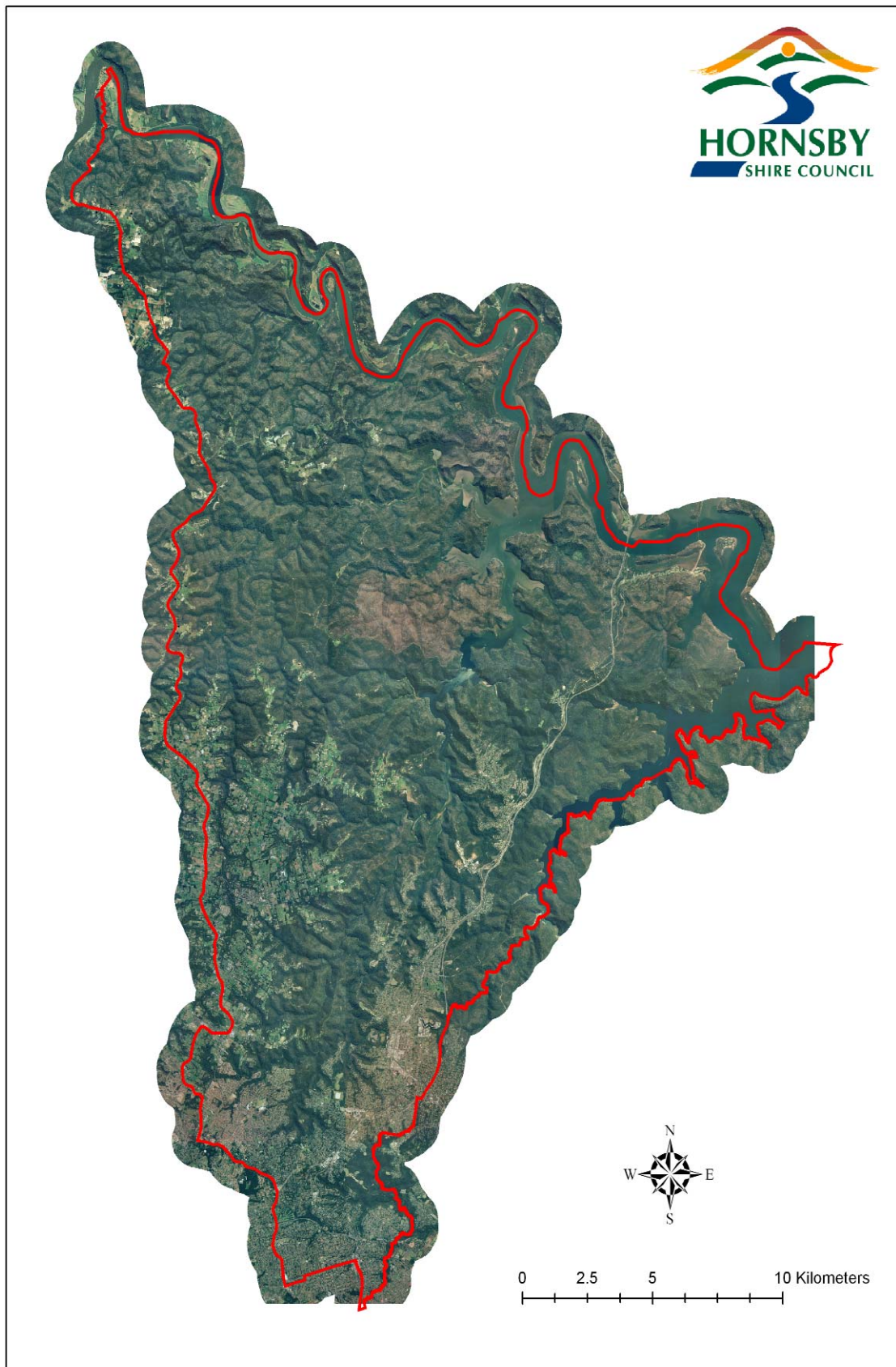
- July 2009 Award application sent in for 2010 NGIA Environment Award.
- July 2009 Extensive Grevillea spp. cuttings undertaken this month
- July 2009 Ross undertook filming with Sydney CMA for weed removal techniques
- July 2009 Nursery Accreditation through NIASA continued
- August 2009 Fairfield Council Nursery volunteers visited Hornsby Council Nursery
- August 2009 Presentation on Nursery given to Hornsby Conservation Society
- August 2009 Across August in general large volume of seed sowing undertaken
- September 2009 Brooke Thompson (Apprentice) commenced 3 days per fortnight in the nursery
- September 2009 Rozelle Community Nursery Volunteer visited site to tour facility
- September 2009 Meeting held with Tree Management Officers to market Street Tree growing by Bushland Team
- September 2009 Presentation given to Australian Plant Society North Shore Group on "Restoration of Shale Forests in the Hornsby Shire"
- September 2009 Site visit to Parramatta Pk to tour river restoration practices
- September 2009 Soil Translocation experiment undertaken for McKinley Place Cherrybrook to compare with tubestock plantings
- September 2009 TAFE Tour of nursery facility
- September 2009 Open Day for AREA 1 Rural Suburbs at Galston Rec Reserve
- September 2009 Field Day at St Benedictine Monastery Arcadia 202 Ironbarks and Turpentines installed
- October 2009 Catchments Tour to Nursery to view water recycling facility
- October 2009 Ryde TAFE Cert III CLM students planting day on Mambara Track edge
- November 2009 Main annual undertaking of seed collection commenced
- November 2009 Nursery Open Day 7/11/2009
- November 2009 Greening Australia Tour of Nursery Facility
- November 2009 Visit to Fairfield Community Nursery 11/11/2009
- November 2009 Site visit to Normanhurst West Public School to foster partnership of BGHF restoration (Tumpinyeri)
- November 2009 TAFE Tour 9/11/2009 25 students
- December 2009 Tree training undertaken with Smith & Smith
- December 2009 Tozer methodology undertaken with Smith & Smith
- December 2009 Tour of Greening Australia's Western Sydney Nurseries
- December 2009 Brooke Thomson (Apprentice) finalised time at nursery
- December 2009 Tour of nursery facility for VCN group
- January 2010 Seed cleaning and storage work undertaken for seed collected 2009
- February 2010 Small memorial ceremony held for Lars Emmerson's passing
- February 2010 Fairfield Council visited Hornsby Council Nursery
- February 2010 Grasses and Groundcovers workshop delivered 03/02/2010
- February 2010 Eucalypt ID and Ecology workshop delivered 24/02/2010

- February 2010 Lone Pine fruit collected Hornsby Aquatic Centre
- March 2010 Open Day for Area 2 south
- March 2010 Stock sent (800) on lone to Royal Easter Show for combined Council's Bushcare stall
- March 2010 Numbers of plants dispatched increased dramatically aided by favourable February rain fall
- April 2010 Open Day for Area 2 10/4/2010
- April 2010 Planting day at Tumpinyeri Normanhurst West Public School 200 BGHF understorey installed by Nursery Volunteers
- April 2010 TAFE tour of nursery facilities 17/4/2010
- April 2010 Presentation to RLIP participants for "Look-alikes" 21/4/2010
- April 2010 Advanced Tree Proposal forwarded to Parks Department for assessment
- May 2010 12/05/2010 Bushcare/Nursery Big Morning Tea as part of National Volunteer Week
- May 2010 Tour with nursery volunteers to Fairfield Council- Cabramatta Creek walk & tour
- May 2010 27/05/2010 TAFE tour of nursery facilities
- May 2010 Cutting propagation commenced due to hot April (production put back)
- June 2010 CRR meeting to discuss next FY works at sites
- June 2010 Pennant Hills Primary visited nursery 60 Year 2 students for seed sowing exercise
- June 2010 Teaching undertaken at Cherrybrook Tech High School for Biodiversity Garden using Turpentine Ironbark Forest plants
- June 2010 Advanced Tree Proposal (April) accepted by Parks Department
- June 2010 Cutting propagation marked increase with cooler weather

NURSERY FACILITY IMPROVEMENTS

- September 2009 Extra new shadehouse door fitted to Station 3 to feed out to Station 7
- October 2009 New back up emergency water system installed at nursery
- February 2010 Plantings within nursery grounds continued. Prostanthera hedge across back of cottage. Eriostemon hedge along Britannia Street.

Appendix 2: Map of Hornsby Shire



Appendix 3: Income and Expenditure – Bushland and Biodiversity 2009-10

